330452

STIC-ILL

AGL 450 AN 78

From: Lacourciere, Karen
Sent: Tuesday, January 30, 2001 6:55 PM
To: STIC-ILL
Subject: stic ill order

Please provide the following reference for use in examining 09/215,257:

Trends Genet. (1998), 14(7), 255-258

CURRENT OPINION IN GENETICS AND DEVELOPMENT, (2000 Oct) 10 (5) 562-7.

Hooper, C. (1991) J. NIH Res. 3:49-54

Trends Biotechnol. (***1990***), 8(12), 340-4

Annu. Rev. Plant Physiol. Plant Mol. Biol. (***1995***), 46, 341-68

NO 1/31

Curr. Top. Microbiol. Immunol. (***1995***), 197, 43-56

Cell (Cambridge, Mass.) (***1997***), 90(3), 385-387

Plant Cell (***1997***), 9(8), 1245-1249

Pal-Bhadra, M., Bhadra, U., and Birchler, J.A. (1997). Cell 90(3), 479-490.

Thank-you!

LC QK710.A5

Karen A. Lacourciere Ph.D.
CM1 11D09 GAU 1635
(703) 308-7523

16
#1.44-NOO
2/5-RC

STIC-ILL

NPL

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Annu. Rev. Plant Physiol. Plant Mol. Biol. (***1995***), 46, 341-68

Curr. Top. Microbiol. Immunol. (***1995***), 197, 43-56

Cell (Cambridge, Mass.) (***1997***), 90(3), 385-387

Plant Cell (***1997***), 9(8), 1245-1249

Pal-Bhadra, M., Bhadra, U., and Birchler, J.A. (1997). Cell 90(3), 479-490.

Thank-you!

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Trends Genet. (1998), 14(7), 255-258

CURRENT OPINION IN GENETICS AND DEVELOPMENT, (2000 Oct) 10 (5) 562-7.

Hooper, C. (1991) J. NIH Res. 3:49-54

Trends Biotechnol. (***1990***), 8(12), 340-4

Annu. Rev. Plant Physiol. Plant Mol. Biol. (***1995***), 46, 341-68

Curr. Top. Microbiol. Immunol. (***1995***), 197, 43-56

Cell (Cambridge, Mass.) (***1997***), 90(3), 385-387

Plant Cell (***1997***), 9(8), 1245-1249

Pal-Bhadra, M., Bhadra, U., and Birchler, J.A. (1997). Cell 90(3), 479-490.

Thank-you!

Karen A. Lacourciere Ph.D.
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(703) 308-7523

cosuppression. Both genetic and biochemical studies have started to unravel the mysteries of RNA interference: genes involved in this process are being identified and in vitro studies are giving the first hints of what is happening to both the **dsRNA** and the affected mRNA molecules after the introduction of the **dsRNA**.

L2 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:199992 CAPLUS
DOCUMENT NUMBER: 133:71533
TITLE: Genetic analysis of RNA interference and transposon silencing in C. elegans
AUTHOR(S): Tabara, Hiroaki
CORPORATE SOURCE: Program Molecular Med., Univ. Massachusetts, Worcester, USA
SOURCE: Jikken Igaku (2000), 18(3), 360-362
CODEN: JIIGEF; ISSN: 0288-5514
PUBLISHER: Yodosha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 10 refs., on genetic anal. of the mechanism of RNA interference (RNAi); biol. role of RNAi; and relations between RNAi and **cosuppression** and quelling, with resp. to role of **dsRNA** in RNAi in Caenorhabditis elegan.

L2 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:222347 CAPLUS
DOCUMENT NUMBER: 132:319930
TITLE: A genetic link between co-suppression and RNA interference in C. elegans
AUTHOR(S): Ketting, Rene F.; Plaster, Ronald H. A.
CORPORATE SOURCE: Division of Molecular Biology, The Netherlands Cancer Institute, Centre for Biomedical Genetics, Amsterdam, 1066 CX, Neth.
SOURCE: Nature (London) (2000), 404(6775), 296-298
CODEN: NATUAS; ISSN: 0028-0836
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Originally discovered in plants, the phenomenon of co-suppression by transgenic DNA has since been obsd. in many organisms from fungi to animals: introduction of transgenic copies of a gene results in reduced expression of the transgene as well as the endogenous gene. The effect depends on sequence identity between transgene and endogenous gene. Some cases of co-suppression resemble RNA interference (the exptl. silencing of genes by the introduction of **double-stranded RNA**), as RNA seems to be both an important initiator and a target in these processes. Here we show that co-suppression in Caenorhabditis elegans is also probably mediated by RNA mols. Both RNA interference and co-suppression have been implicated in the silencing of transposons. We now report that mutants of C. elegans that are defective in transposon silencing and RNA interference (mut-2, mut-7, mut-8 and mut-9) are in addn. resistant to co-suppression. This indicates that RNA interference and co-suppression in C. elegans may be mediated at least in part by the same mol. machinery, possibly through RNA-guided degrdn. of mRNA mols.
REFERENCE COUNT: 30
REFERENCE(S): (2) Baulcombe, D; Curr Opin Biotechnol 1996, V7, P173 CAPLUS
(3) Cogoni, C; Nature 1999, V399, P166 CAPLUS
(4) Collins, J; Nature 1987, V328, P726 CAPLUS
(6) Fire, A; Trends Genet 1999, V15, P358 CAPLUS
(7) Francis, R; Genetics 1995, V139, P579 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 13 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 2000:70572 LIFESCI

in the total RNA population. It is proposed that the yeast PAB1 gene or its product interferes with as yet unidentified functions of PABs, which functions are manifest only in differentiated, developed plants. Surprisingly, transgenic plants expressing the yeast PAB1 gene are also observed to have a systemic acquired resistance (SAR) to bacterial, fungal and viral pathogens.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 3 OF 13 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2000386785 MEDLINE
DOCUMENT NUMBER: 20347034
TITLE: Transgene-mediated **cosuppression** in the C. elegans germ line.
AUTHOR: Dernburg A F; Zalevsky J; Colaiacovo M P; Villeneuve A M
CORPORATE SOURCE: Departments of Developmental Biology and Genetics, Stanford University School of Medicine, CA 94305-5329, USA.
SOURCE: GENES AND DEVELOPMENT, (2000 Jul 1) 14 (13) 1578-83. Journal code: FN3. ISSN: 0890-9369.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200010
ENTRY WEEK: 20001002
AB Functional silencing of chromosomal loci can be induced by transgenes (**cosuppression**) or by introduction of **double-stranded RNA** (RNAi). Here, we demonstrate the generality of and define rules for a transgene-mediated **cosuppression** phenomenon in the Caenorhabditis elegans germ line. Functional repression is not a consequence of persistent physical association between transgenes and endogenous genes or of mutations in affected genes. The **cosuppression** mechanism likely involves an RNA mediator that defines its target specificity, reminiscent of RNAi. **Cosuppression** is strongly abrogated in rde-2 and mut-7 mutants, but is not blocked in an rde-1 mutant, indicating that **cosuppression** and RNAi have overlapping but distinct genetic requirements.

L2 ANSWER 4 OF 13 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000469864 MEDLINE
DOCUMENT NUMBER: 20437792
TITLE: The silence of the genes.
AUTHOR: Plasterk R H; Ketting R F
CORPORATE SOURCE: Hubrecht Laboratory, Uppsalalaan 8, 3584 CT, The, Utrecht, Netherlands.. plasterk@niob.knaw.nl
SOURCE: CURRENT OPINION IN GENETICS AND DEVELOPMENT, (2000 Oct) 10 (5) 562-7. Ref: 54
Journal code: BJC. ISSN: 0959-437X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200012
ENTRY WEEK: 20001202
AB About two years ago, it was recognized that introduction of **double-stranded RNA** (**dsRNA**) had a potent effect on gene expression, in particular on mRNA stability. Since then, this process has been found to occur in many different organisms, and to bear a strong resemblance to a previously recognized process in plants, called

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 4503
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a D. melanogaster insulin-like gene and
methods for identifying insulin-like genes. The methods provide nucleotide sequences of a D. melanogaster insulin-like gene, amino acid sequences of the encoded proteins, and derivatives (e.g., fragments) and
analogs thereof. The invention further relates to fragments (and derivatives and analogs thereof) of insulin-like proteins which comprise
one or more domains of an insulin-like protein. Antibodies to an insulin-like protein, and derivatives and analogs thereof, are provided.
Methods of production of an insulin-like protein (e.g., by recombinant means), and derivatives and analogs thereof, are provided. Further, methods to identify the biological function of a D. melanogaster insulin-like gene are provided, including various methods for the functional modification (e.g., overexpression, underexpression, mutation, knock-out). Still further, methods to identify a D. melanogaster gene which modifies the function of, and/or functions in a signaling pathway with, an insulin-like gene are provided. The invention
further provides uses of Drosophila insulin-like nucleic acids and proteins, e.g., as a media additive, and as a pesticide.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 2 OF 13 USPATFULL
ACCESSION NUMBER: 2000:10095 USPATFULL
TITLE: Use of yeast poly (A) binding proteins and their genes for broad range protection of plants against bacterial,
fungal and viral pathogens
INVENTOR(S): Hunt, Arthur G., Lexington, KY, United States
Li, Qing-Shun, Lexington, KY, United States
Yang, Jianjun, Ithaca, NY, United States
Von Lanken, Carol, Lexington, KY, United States
PATENT ASSIGNEE(S): University of Kentucky Research Foundation, Lexington, KY, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 6018106	20000125	
APPLICATION INFO.:	US 1998-116879	19980716	(9)
DOCUMENT TYPE:	Utility		
PRIMARY EXAMINER:	Smith, Lynette R. F.		
ASSISTANT EXAMINER:	Nelson, Amy J.		
LEGAL REPRESENTATIVE:	McDermott, Will & Emery		
NUMBER OF CLAIMS:	20		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 5 Drawing Page(s)		
LINE COUNT:	931		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Plants that accumulate the yeast polyadenylate binding protein (yPAB) display a range of abnormalities, including a characteristic chlorosis in leaves to a necrosis and pronounced inhibition of growth. The severity of these abnormalities reflects the levels of yeast PAB expression in the transgenic plants. In contrast, no obvious differences
are seen in undifferentiated callus cultures that express the same range
of yeast PAB. The expression of the yeast PAB1 gene in plants does not affect expression of the plant PAB gene family or alter poly(A) length

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COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION
FULL ESTIMATED COST | 0.15 | 0.15

FILE 'MEDLINE' ENTERED AT 18:26:19 ON 30 JAN 2001

FILE 'CAPLUS' ENTERED AT 18:26:19 ON 30 JAN 2001
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE 'LIFESCI' ENTERED AT 18:26:19 ON 30 JAN 2001

FILE 'BIOSIS' ENTERED AT 18:26:19 ON 30 JAN 2001

FILE 'EMBASE' ENTERED AT 18:26:19 ON 30 JAN 2001

FILE 'USPATFULL' ENTERED AT 18:26:19 ON 30 JAN 2001

=> s cosuppression and (dsrna or (double()stranded()rna)

UNMATCHED LEFT PARENTHESIS 'AND (DSRNA'
The number of right parentheses in a query must be equal to the
number of left parentheses.

=> s cosuppression and (dsrna or (double()stranded()rna))

L1 25 COSUPPRESSION AND (DSRNA OR (DOUBLE(W) STRANDED(W) RNA))

=> dup rem l1

PROCESSING COMPLETED FOR L1
L2 13 DUP REM L1 (12 DUPLICATES REMOVED)

=> d l2 ibib abs tot

L2 ANSWER 1 OF 13 USPATFULL
ACCESSION NUMBER: 2000:141510 USPATFULL
TITLE: Nucleic acids proteins of a D. melanogaster insulin-like gene and uses thereof
INVENTOR(S): Leptin, Maria, Heinestrasse 19, Cologne, Germany, Federal Republic of D-50931

	NUMBER	DATE
PATENT INFORMATION:	US 6135942	20001024
APPLICATION INFO.:	US 1998-201226	19981130 (9)

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Chambers, Jasemine
ASSISTANT EXAMINER: Shukla, Ram
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 12

by treating the plants with a non-phytotoxic chemical which induces expression of the critical gene.

APPLICATION INFO.: US 1993-107748 19930820 (8)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1991-771331, filed on 4 Oct 1991, now abandoned which is a continuation-in-part of Ser. No. US 1991-660344, filed on 22 Feb 1991, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Moody, Patricia R.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis, LLP
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
LINE COUNT: 2498
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Transgenic plants that are modified to produce fruits that have altered levels of soluble solids compared to non-transgenic plants of the same species are provided. The transgenic plants are prepared by introducing into plants DNA constructs that encode invertase operatively linked to DNA encoding regulatory regions that direct transcription of the DNA encoding invertase and operatively linked to DNA encoding amino acids that direct proper processing of the invertase through the secretory pathways of the plant and targeting of the invertase to the vacuole.

In particular, DNA constructs encoding tomato plant vacuolar invertase in operative linkage with a developmentally regulated promoter region are provided. Preferred regulatory and structural DNA is obtained from genomic DNA clones and cDNA clones encoding tomato fruit vacuolar invertases from the commercial tomato plant, Lycopersicon esculentum, and wild tomato plant, Lycopersicon pimpinellifolium.

Probes derived from the genomic DNA and cDNA, antibodies specific for tomato fruit invertase, and uses therefor, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 13 OF 13 USPATFULL
ACCESSION NUMBER: 95:114287 USPATFULL
TITLE: Nucleotide sequences mediating male fertility and method of using same
INVENTOR(S): Albertsen, Marc C., West Des Moines, IA, United States
Beach, Larry R., Des Moines, IA, United States
Howard, John, Des Moines, IA, United States
Huffman, Gary A., Des Moines, IA, United States
PATENT ASSIGNEE(S): Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5478369	19951226	<--
APPLICATION INFO.:	US 1993-103739	19930802 (8)	

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1990-537183, filed on 12 Jun 1990, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Benzion, Gary
LEGAL REPRESENTATIVE: Pioneer Hi-Bred International, Inc.
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 4,16
NUMBER OF DRAWINGS: 8 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT: 1217
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Nucleotide sequences mediating male fertility in plants are described, with DNA molecule and amino acid sequences set forth. Use of the nucleotide sequences to mediate fertility in plants is also described. In one such method, an inducible promoter is used to regulate expression of the DNA molecule. The control sequences are modified so that it is normally "off" and as a result the plants are male sterile. When it is desired to reproduce the male sterile plants, male fertility is restored

INVENTOR(S): Fitzmaurice, Leona C., San Diego, CA, United States
Mirkov, T. Erik, San Diego, CA, United States
Elliott, Kathryn J., San Diego, CA, United States
Butler, William Owen, San Diego, CA, United States
Konno, Yoshihiro, Onishi, Japan
Dickinson, Craig Duane, San Diego, CA, United States
PATENT ASSIGNEE(S): The Salk Institute Biotechnology/Industrial Associates,
Inc., San Diego, CA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5665579	19970909	<--
APPLICATION INFO.:	US 1994-245809	19940517 (8)	

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-771331, filed on 4 Oct 1991, now abandoned which is a continuation-in-part of Ser. No. US 1991-660344, filed on 22 Feb 1991, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Fox, David T.
ASSISTANT EXAMINER: McElwain, Elizabeth F.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis, L.L.P.
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 17
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT: 3565
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Transgenic plants that are modified to produce fruits that have altered levels of soluble solids compared to non-transgenic species of the same species are provided. The transgenic plants are modified by introduction of DNA constructs that encode invertase operatively linked to DNA encoding regulatory regions that direct transcription of the DNA encoding invertase and to DNA encoding sequences that direct proper processing of the invertase through the secretory pathways of the plant and targeting of the invertase to the vacuole.

In particular, DNA constructs encoding tomato plant vacuolar invertase in operative linkage with a developmentally regulated promoter region are provided. Preferred regulatory and structural DNA is obtained from genomic DNA clones and cDNA clones encoding tomato fruit vacuolar invertases from the commercial tomato plant, Lycopersicon esculentum, and wild tomato plant, Lycopersicon pimpinellifolium.

Probes derived from the genomic DNA and cDNA, antibodies specific for tomato fruit invertase, and uses therefore, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 12 OF 13 USPATFULL
ACCESSION NUMBER: 96:106598 USPATFULL
TITLE: Invertase gene(s) and uses thereof
INVENTOR(S): Butler, William O., San Diego, CA, United States
Konno, Yoshihiro, Gunma, Japan
Dickinson, Craig D., San Diego, CA, United States
Fitzmaurice, Leona C., San Diego, CA, United States
Mirkov, Theodore E., San Diego, CA, United States
Elliott, Kathryn J., San Diego, CA, United States
PATENT ASSIGNEE(S): The Salk Institute Biotechnology/Industrial Associates,
Inc., La Jolla, CA, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5576428	19961119	<--

ACCESSION NUMBER: 1991:115828 CAPLUS
DOCUMENT NUMBER: 114:115828
TITLE: Altered gene expression in plants due to trans interactions between homologous genes
AUTHOR(S): Jorgensen, Richard
CORPORATE SOURCE: DNA Plant Technol. Corp., Oakland, CA, 94608-1239, USA
SOURCE: Trends Biotechnol. (**1990**), 8(12), 340-4
CODEN: TRBIDM; ISSN: 0167-7799
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review** with 27 refs. **Cosuppression** of anthocyanin biosynthetic enzymes in petunia, other trans interactions in transgenic plants or in fungi, and the mol. mechanisms of **cosuppression** are discussed. Apparently, homologous sequences are able to interact somatically in trans, in a manner influenced by sequence context or location. There are also mechanistic similarities between **cosuppression** and some other trans interaction and epigenetic phenomena in plants, fungi, and animals.

L7 ANSWER 10 OF 13 USPATFULL
ACCESSION NUMBER: 97:104670 USPATFULL
TITLE: Suppression of plant gene expression using processing-defective RNA constructs
INVENTOR(S): Chua, Nam-Hai, Scarsdale, NY, United States
van der Krol, Alexander, Utrecht, Netherlands
PATENT ASSIGNEE(S): The Rockefeller University, New York, NY, United States
(U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5686649	19971111	<--
APPLICATION INFO.:	US 1995-375222	19950119 (8)	

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-216229, filed on 22 Mar 1994, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Chereskin, Che S.
LEGAL REPRESENTATIVE: Klauber & Jackson
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 67 Drawing Figure(s); 16 Drawing Page(s)
LINE COUNT: 1594
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed is a novel method of suppressing plant gene expression. The suppression is achieved by transforming a plant with a DNA construct encoding a processing-defective RNA (pd-RNA constructs). A pd-RNA construct comprises a plant active promoter operably linked to a pd-RNA encoding segment (pd-RNA segment), wherein the pd-RNA segment comprises a sequence substantially homologous to the target gene and a defective intron and/or a defective 3' termination and processing sequence (hereinafter 3' processing sequence). The pd-RNA constructs of the present invention are designed to express target-gene-homologous RNA transcripts that are defective for messenger RNA processing. Various types of pd-RNA constructs are disclosed, including those defective for endonucleolytic cleavage or polyadenylation at the 3' end of the pd-RNA transcript and/or intron splicing. A pd-RNA construct of the invention may used to suppress a single, specific target gene or multiple target genes. Further, the suppression effect of a pd-RNA construct can be modulated and controlled through the use of an appropriate promoter.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 11 OF 13 USPATFULL
ACCESSION NUMBER: 97:81131 USPATFULL
TITLE: Invertase genes and uses thereof

AUTHOR(S): Flavell, R.B.; O'Dell, M.; Metzlaff, M.; Bonhomme, S.;
Cluster, P.D.
CORPORATE SOURCE: John Innes Centre, Norwich, NR4 7UH, UK
SOURCE: Curr. Top. Microbiol. Immunol. (**1995**), 197, 43-56
CODEN: CTMIA3; ISSN: 0070-217X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review** with 63 refs. discussing co-suppression and plant development, hypotheses to explain gene silencing, and co-suppression of chalcone synthase in transgenic petunias.

L7 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:644977 CAPLUS
DOCUMENT NUMBER: 123:29525
TITLE: Regulation of metabolism in transgenic plants
AUTHOR(S): Stitt, Mark; Sonnewald, Uwe
CORPORATE SOURCE: Inst. Bot., Univ. Heidelberg, Heidelberg, 69120, Germany
SOURCE: Annu. Rev. Plant Physiol. Plant Mol. Biol. (**1995**), 46, 341-68
CODEN: ARPBEX; ISSN: 1040-2519
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review** with >180 refs. discussing how genetically manipulated plants are being used to study the regulation of metab. in plants, using carbohydrate metab. as an example. The mol. tools required are introduced, including the history of Agrobacterium tumefaciens-mediated gene transfer and other transformation techniques, the availability of promoters to achieve a specific or induced expression, strategies to target proteins to subcellular compartments of the cell, and the use of antisense or **cosuppression** to inhibit expression of endogenous genes. A discussion then follows of how such plants can be used in biochem. and physiol. expts. to identify and quantify the importance of enzymes and processes that control metabolic fluxes, storage, and growth. Emerging com. applications are also surveyed.

L7 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:624423 CAPLUS
DOCUMENT NUMBER: 123:133952
TITLE: The use of antisense and sense genes to generate mutant phenotypes: Suppression of flowers pigmentation
in petunia
AUTHOR(S): Kooter, J. M.; van Blokland, R.; de Lange, P.; Stam, Maike; Mol, J. N. M.
CORPORATE SOURCE: Faculty Biology, Vrije Universiteit, Amsterdam, 1081 HV, Neth.
SOURCE: Bull. Liaison - Groupe Polyphenols (**1992**), 16(Pt. 2), 261-72
CODEN: BLPLAS; ISSN: 0242-8466
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review**, with 47 refs., on the inhibition of flavonoid gene expression by antisense genes to suppress flower pigmentation in petunia, pigmentation pattern generation by antisense chalcone synthase genes, decrease of antisense gene-induced suppression by gibberellic acid, light enhancement of antisense gene-induced inhibition of flavonoid gene expression, the factors that are involved in the efficiency of antisense RNA-induced inhibition, transinactivation of genes by sense RNA-producing transgenes (**cosuppression** or sense-suppression), antisense genes as a tool to probe the function of gene products, and dissecting polypeptide complexes and regulatory networks by using antisense genes.

L7 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2001 ACS

animals, silencing of dispersed copies, as frequently seen in plant and fungal **cosuppression**, had not been clearly shown until the studies of Pal-Bhadra (1997). I focus here on mechanistic and theor. questions posed by **cosuppression** from the expanded perspective provided by recent work in animals.

L7 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:99723 CAPLUS
DOCUMENT NUMBER: 126:153205
TITLE: Analysis of a tobacco transgene locus that triggers both transcriptional and posttranscriptional silencing
AUTHOR(S): Vaucheret, Herve; Elmayan, Taline; Mourrain, Philippe; Palauqui, Jean-Christophe
CORPORATE SOURCE: Laboratoire de Biologie Cellulaire, INRA, Versailles, F-78026, Fr.
SOURCE: Cold Spring Harbor Monogr. Ser. (**1996**), 32(Epigenetic Mechanisms of Gene Regulation), 403-414
CODEN: CHMSDK; ISSN: 0270-1847
PUBLISHER: Cold Spring Harbor Laboratory Press
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review** with 25 refs. An atypical silencing locus that triggers both posttranscriptional silencing of homologous host genes and transcriptional silencing of homologous transgenes is described and compared to typical silencing loci triggering **cosuppression** of the same homologous host genes. A construct contg. the bacterial neomycin phosphotransferase gene Npt downstream from the CaMV 19S promoter and an antisense cDNA to the tobacco nitrate reductase gene Nii1 downstream of the CaMV 35S promoter inserted into a telomere locus in transgenic plant 271. This construct silenced both host nitrate reductase gene expression and transgene expression from CaMV 19S and 35S promoters. Host nitrate reductase gene silencing appeared to take place at the posttranscriptional level and involved **cosuppression** of the transgene and the host gene. The silencing of addnl., unlinked transgenes controlled by the 19S and 35S promoters resulted from heritable methylation of these promoters.

L7 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:99721 CAPLUS
DOCUMENT NUMBER: 126:127402
TITLE: Sense **cosuppression** of flower color genes: Metastable morphology-based phenotypes and the prepattern - threshold hypothesis
AUTHOR(S): Jorgensen, Richard A.; Que, Qiudeng; English, James J.; Wang, Huai-Yu
CORPORATE SOURCE: Environmental Horticulture, University of California, Davis, CA, 95616-8587, USA
SOURCE: Cold Spring Harbor Monogr. Ser. (**1996**), 32(Epigenetic Mechanisms of Gene Regulation), 393-402
CODEN: CHMSDK; ISSN: 0270-1847
PUBLISHER: Cold Spring Harbor Laboratory Press
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review** with 23 refs. Topics include: patterns of Chs sense **cosuppression** in petunia flowers, the prepattern-threshold hypothesis, A role for chromatin, and presetting and parachromatin: related concepts from McClintock and Brink.

L7 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:723767 CAPLUS
DOCUMENT NUMBER: 123:310215
TITLE: Developmental regulation of co-suppression in Petunia hybrida

AUTHOR(S): Kinney, Anthony J.
CORPORATE SOURCE: DuPont Experimental Station, Wilmington, DE, 19880-0402, USA
SOURCE: Physiol., Biochem. Mol. Biol. Plant Lipids, [Proc. Int. Symp. Plant Lipids], 12th (**1997**), 298-300. Editor(s): Williams, John Peter; Khan, Mobashsher Uddin; Lem, Nora Wan. Kluwer: Dordrecht, Neth.
CODEN: 65BHAZ
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A **review**, with no refs., on the cloning of fatty acid biosynthetic genes in crop plants in order to improve the edible oils from these crops. This is illustrated by the use of gene-transgene **cosuppression**, or Transwich, of fatty acid .omega.6 desaturase gene Fad 2-1 in soybean for redn. of linoleic acid to produce high-oleate oils. A novel fatty acid, 9,15-octadecanoic acid, was found in some high-oleic lines, but was not considered to be of concern for food safety.
Results from field trials and cooking and storage studies were included.

L7 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:586314 CAPLUS
DOCUMENT NUMBER: 127:273330
TITLE: Comprehending **cosuppression**
AUTHOR(S): Taylor, Crispin B.
CORPORATE SOURCE: USA
SOURCE: Plant Cell (**1997**), 9(8), 1245-1249
CODEN: PLCEEW; ISSN: 1040-4651
PUBLISHER: American Society of Plant Physiologists
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A **review** with 28 refs. Introduced genes in transgenic plants can suppress the expression of related endogenous genes and/or transgenes already present in the genome, a phenomenon termed homol.-dependent gene silencing, and, in some instances, they can curtail the replication and spread of homologous RNA viruses. Post-transcriptional homol.-dependent gene silencing (i.e., **cosuppression**) describes the loss of expression of a transgene and related endogenous or viral genes in transgenic plants. **Cosuppression** often, but not always, occurs when transgene transcripts are abundant, and is generally thought to be triggered at the level of mRNA processing, localization, and/or degrdn. This **review** discusses a no. of exptl. systems and models developed in an effort to describe the phenomenol. of **cosuppression** (i.e., its phenotypes) and to understand its mechanisms.

L7 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:546801 CAPLUS
DOCUMENT NUMBER: 127:230662
TITLE: **Cosuppression** comes to the animals
AUTHOR(S): Bingham, Paul M.
CORPORATE SOURCE: Biochemistry and Cell Biology, State University of New York, Stony Brook, NY, 11794, USA
SOURCE: Cell (Cambridge, Mass.) (**1997**), 90(3), 385-387
CODEN: CELLB5; ISSN: 0092-8674
PUBLISHER: Cell Press
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A **review**, with .apprx.20 refs. **Cosuppression**, the presence of supernumary copies of a gene in the nuclear genome results in specific repression of expression of some or all copies of that gene. While silencing of tandemly repeated gene copies has been demonstrated in